

## Observations on butterflies recorded during winter in Andaman Islands, India

This paper reports the findings of a 10 day butterfly survey (27 December 2018–06 January 2019) carried out on butterflies from the Andaman Islands. Forested areas were surveyed at 10 locations while travelling from Chidia Tapu in the South through Port Blair right up to Diglipur & Ross & Smith Islands in the north along with Havelock and Neil Islands.

Sampling was carried out at each site for 1–2 hours in a stretch between 1000–1600 h by 'Pollard Walk' method (Pollard 1977; Pollard & Yates 1993). All the species and the number of individuals up to 20 m on both sides of the transect/trail were recorded and photographed while walking on foot. Abundances of each species observed were and then ranked from lowest to highest.

NORTH
ANDAMAN
Digitipur
Seed Island
North Reel Island
South Sentinal Island
North Reel Island
North Reel Island
South Sentinal Island
North Reel Island
Nort

Map of Andaman Islands depicting the locations of sites surveyed for butterflies.

The sites surveyed are mentioned below:

	District	Locations
1	North Andaman	Diglipur, Roth & Smith Islands
2	Middle Andaman	Rangat, Baratang, Lime Stone Caves, Mud Volcano, Parrot Island
3	South Andaman	Mount Harriet NP, Chidiyatapu & Port Blair, Havelock Island, Neil Island.

The species were then divided into different classes from most abundant to least abundant [Common>Locally Common>Uncommon>Rare]. Common-Species commonly observed at all the locations; Fairly common species commonly observed only at two locations; Locally



Andaman Pasha, *Herona marathus andamana* Moore, 1877 ( $\circlearrowleft$ ) in Mt. Harriet National Park, Andaman Islands (31 December 2018).

species from Baratang, Central Andaman (16.x.2014) and Chidyia Tapu, South Andamans (17. iv.2017) (Anon 2022); however, this is the first record of this species from Mt. Harriet National Park, South Andaman. The flight period of the species given in literature (Kehimkar 2016) and earlier records (Anon 2022) and museum specimens at National Insect Collection Forest Research Institute, Dehradun, India (315.

Common species commonly observed at single location; Uncommon – 2 or 3 records; Rare – single record.

A total of 62 species were recorded (Table 1). Three species Papilio mayo Atkinson, 1873, Losaria rhodifer (Butler, 1876), Ixias pyrene andamana Moore, 1877 amongst these are endemic and restricted to Andaman Islands, while most of the subspecies are endemic to Andaman & Nicobar Islands. Nine species are protected and listed under various Schedules of the Wildlife Protection Act 1972 (Table 1). The highlight of the survey was the rediscovery of the rare Andaman Pasha, Herona marathus andamana Moore, 1877, which was earlier believed to be extinct from Andaman Islands (Khatri 1993; Mohanraj & Veenakumari 2011) (Table 1). Although there are two recent photographic records of this



Tropical evergreen forest, habitat of Andaman Pasha, *Herona marathus andamana* Moore, 1877 in Mt. Harriet National Park (31 December 2018).

## Table 1. Butterflies species observed in Andaman Islands (27 December 2018–06 January 2019).

	Species	Common Name	Wildlife Protection Act 1972/ Endemism	Place	Date	Status*
Α.	Papilionidae			•	•	•
1	Losaria rhodifer (Butler, 1876)	Andaman Clubtail	Endemic	Mt Harriet NP	31Dec2018	Uncommon
2	Troides helena heliconoides (Moore, 1877)	Andaman Common Birdwing		Neil Island	04Jan2019	Locally Common
3	Papilio polytes stichioides Evans, 1912	Andaman Common Mormon		North Andamans	29Dec2018	Locally Common
4	Papilio mayo Atkinson, 1873	Andaman Mormon	Sch II, Part II; Endemic	Mt Harriet NP, Chiria Tapu	31Dec2018 & 6Jan2019	Rare/Uncommon
5.	Graphium agamemnon andamana (Lathy, 1907)	Andaman Tailed Jay		South Andaman	29 Dec2018	Fairly Common
В	Pieridae					
6	Delias hyparete indica (Wallace, 1867)	Painted Jezebel		S. Andaman	27Dec2018	Locally Common
7	Gandaca harina andamana Moore, 1906	Andaman Tree Yellow		Mt Harriet NP; Central Andaman	30-31Dec2018	Fairly Common
8	Eurema blanda silhetana Wallace, 1867	Andaman Three Spot Grass Yellow		Mt Harriet NP; Chiria Tapu	31Dec2018 & 6Jan2019	Locally Common
9	Catopsilia pomona pomona (Fabricius, 1775)	Oriental Lemon Emigrant		S. Andaman	27Dec2018	Common
10	lxias pyrene andamana Moore, 1877	Andaman Yellow Orange Tip	Endemic	North & Central Andamans	30-31Dec2018	Common
11	Hebomoia roepstorfii Wood-Mason, 1880	Andaman Great Orange Tip		Mt Harriet NP	31 Dec2018	Fairly Common
12	Pareronia ceylanica naraka (Moore, 1877)	Andaman Dark Wanderer		North Andaman	29Dec2018	Locally Common
13	Appias albina darada (C. & R. Felder, [1865])	Sylhet Common Albatross	Sch II, Part II	Mt Harriet NP	31Dec2018	Common
14	Cepora nadina andamana (Swinhoe, 1889)	Andaman Lesser Gull		Central Andaman- Mud Volcano	30Dec2018	Locally Common
15	Cepora nerissa lichenosa (Moore, 1877)	Andaman Common Gull		North & South Andaman	27-30 Dec2018	Locally Common
C.	Lycaenidae					
16	Spindasis lohita zoilus (Moore, 1877)	Andaman Long-banded Silverline	Sch II, Part II	North Andaman	29 Dec2018	Uncommon
C.	Lycaenidae					
17	Prosotas nora fulva (Evans, [1925])	Andaman Common Lineblue		South Andaman's	30Dec2018	Common
18	Jamides celeno blairana Evans, 1925	Andaman Common Cerulean		Mt Harriet NP	31Dec2018	Common
19	Neopithecops zalmora andamanus Eliot & Kawazoé, 1983	Andaman Quaker		Central Andaman- Lime stone caves	28Dec2018	Common
20	Chilades pandava pandava (Horsfield, [1829])	Oriental Plains Cupid		Central & South Andamans	27–30Dec2018	Common

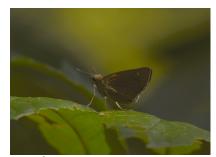
	Species	Common Name	Wildlife Protection Act 1972/ Endemism	Place	Date	Status*
21	Zizeeria karsandra (Moore, 1865)	Dark Grass Blue		South Andamans	30Dec2018	Fairly Common
22	Amblypodia anita andamanica (Riley, 1922)	Andaman Purple Leaf Blue		N. Andaman	29Dec2018	Uncommon
23	Hypolycaena erylus andamana Moore, 1877	Andaman Common Tit		N. Andaman	29Dec2018	Uncommon
24	Loxura atymnus prabha (Moore, 1877)	Andaman Yamfly		Mt Harriet NP	31Dec2018	Locally Common
25	Abisara bifasciata bifaciata Moore1877	Plum Judy		N. Andaman	29Dec2018	Locally common
D.	Nymphalidae					
26	Idea agamarschana cadelli (Wood- Mason & de Nicéville, 1881)	Andaman Tree -Nymph		Mt Harriet NP	31Dec2018	Local
27	Parantica aglea melanoleuca Moore, 1877	Andaman Glassy Tiger		Central Andaman- Mud Volcano	30Dec2018	Locally Common
28	Euploea core andamanensis Atkinson, [1874]	South Andaman Crow		Central & South Andamans	28–30Dec2018	Locally Common
29	Elymnias cottonis cottonis (Hewitson, 1874)	Andaman Common Palmfly		Central & South Andamans	28–30Dec2018	Common
30	Mycalesis anaxias radza Moore, 1877	Andaman Eyed-Bush Brown	Sch II, Part II	Central Andaman- Lime stone caves	28Dec2018	Rare
31	Mycalesis visala andamana (Moore, [1892])	Andaman Long-Brand Bushbrown		Central & South Andaman-Chiria Tapu	28 Dec2018 & 6Jan2019	Locally common
D.	Nymphalidae					
32	Lethe europa nudgara Fruhstorfer, 1911	Andaman Bamboo Treebrown		Mt Harriet NP	31Dec2018	Uncommon
33	Cethosia biblis andamanica Stichel, 1902	Andaman Red Lacewing		Central & South Andamans	28–31Dec2018	Fairly Common
34	Cethosia cyane cyane (Drury, [1773])	Leopard Lacewing		South Andamans	28-30Dec2018	Common
35	Phalanta alcippe andamana (Fruhstorfer, 1904)	Andaman Small Leopard	Sch II, Part II	Mt Harriet NP	31Dec2019	Locally Common
36	Vindula erota pallida Staudinger, 1885	Andaman Crusier		N. Andaman	29Dec2018	Locally Common
37	Cupha erymanthis andamanica Moore, [1900]	Andaman Rustic		Central Andaman- Baratang	28Dec2018	Locally Common
38	Parthenos sylvia roepstorfii Moore, [1897]	Andaman Clipper		North & South Andaman	28-31Dec2018	Locally Common
39	Herona marathus andamana Moore, 1877	Andaman Pasha		Mt Harriet NP	31Dec2018	Rare
40	Neptis nata evansi Eliot 1969	Andaman Clear Sailer		Central Andaman & Chiria Tapu	30Dec2018 & 6Jan2019	Locally Common
41	Neptis hylas andamana Moore, 1877	Andaman Common Sailer		North Andaman	29Dec2018	Common
42	<i>Neptis jumbah amorosca</i> Fruhstorfer, 1905	Andaman Chestnut- streaked Sailer		N. Andaman	29Dec2018	Locally Common

	Species	Common Name	Wildlife Protection Act 1972/ Endemism	Place	Date	Status*
43	Euthalia acontius acontius (Hewitson, 1874)	Andaman Baron	Sch II, Part II	N. Andaman	29Dec2018	Locally Common
44	Euthalia teuta teutoides (Moore, 1877)	Andaman Banded Marquis		N. Andaman	29Dec2018	Rare
45	Tanaecia cibaritis (Hewitson, 1874)	Hewitson's Andaman Viscount		N. & S.Andaman	29–30Dec2018	Locally Common
46	Polyura athamas andamanica (Fruhstrofer,1906)	Indian Nawab		Mt Harriet NP	31Dec2018	Uncommon
47	Cyrestis cocles formosa C. & R. Felder,1867	Marbled Map		N. Andaman	29Dec2018	Rare
48	Laringa horsfieldii andamanensis de Nicéville, 1895	Andaman Banded Dandy		N. Andaman	29Dec2018	Rare
49	Junonia atlites atlites (Linnaeus, 1763	Grey Pansy		Central Andaman- Lime stone caves	28Dec2018	Locally Common
50	Junonia almana almana (Linnaeus, 1758).	Peacock Pansy		Central Andaman- Lime stone caves	28Dec2018	Locally Common
51	Doleschallia bisaltide andamanensis Fruhstorfer, 1899	Andaman Autumn Leaf	Sch I, Part IV	North Andaman	29Dec2018	Uncommon
52	Moduza procris anarta (Moore, 1877)	Commander		Middle Andaman -Baratang	30Dec2018	Uncommon
E.	Hesperiidae					
53	Hasora vitta manda (Evans,1949)	Indian Plain Banded Awl	Sch II, Part II	North Andaman	29Dec2018	Uncommon
54	Tagiades gana alica Moore, 1877	Andaman Suffused Snowflat		North Andaman	29Dec2018	Common
55	Tagiades japetus ravina Fruhstorfer, 1910	Common Snow Flat		Mt Harriet NP	31Dec2018	Common
56	Oriens gola gola (Moore, 1877)	Andaman Common Dartlet		Central & South Andaman	30–31Dec2018	Common
57	Notocrypta curvifascia curvifascia (C. & R. Felder, 1862)	Restricted Demon		Mt Harriet NP	31Dec2018	Common
58	Pelopidas conjunctus (Herrich- Schäffer, 1869)	Conjoined Swift		Mt Harriet NP	31Dec2018	Uncommon
59	Pelopidas agna agna (Moore, [1866])	Large Branded Swift		North Andaman	29Dec2018	Common
60	Pelopidas mathias mathias (Fabricius,1798)	Small Branded Swift		Mt Harriet NP	31Dec2018	Common
61	Baoris farri scopulifera Moore, [1884]	Complete Paintbrush Swift	Sch IV.	Central Andaman- Mud Volcano	30Dec2018	Uncommon
62	Matapa aria aria (Moore, [1866])	Common Branded Redeye		Central Andaman	30Dec2018	Uncommon
*Stat	us as observed during the present surve		<u> </u>			





Abisara bifasciata bifaciata.



Baoris farri.



Cepora nadina andamana.



Cepora nerissa lichenosa.



Cethosia cyane cyane.



Chilades pandava pandava.



Cupha erymanthis andamanaica.



Cyrestis cocles formosa.



Delias hyparete indica.



Doleschallia bisaltide andamanensis.



Elymnias cottonis cottonis.



Euploea core andamanensis.



Eurema blanda silhetana.



Gandaca harina andamana.



Graphium agamemnon andamana.





Hasora vitta.



Herona marathus andamanus.



Hypolycaena erylus andamana.



Idea agamarschana cadelli.



lxias pyrene andamana.



Jamides cleno blairana.



Junonia almana almana.



Junonia atlites atlites.



Lethe europa nudgara.



Loxura atymnus prabha.



Matapa aria.



Moduza procris anarta.



Mycalesis visala andamana.



Neopithecops zalmora andamanus.



Neptis hylas andamana.





Neptis jumbah amorosca.



Neptis nata evansi.



Notocrypta curvifascia.



Oriens gola gola.



Papilio polytes stichioides.



Parantica aglea melanoleuca.



Pareronia ceylanica naraka.



Parthenos sylvia roepstorfii.



Pelopidas conjunctus.



Pelopidas mathias.



Phalantha alcippe andamana.



Spindasis lohita zoilus.



Tagiades gana alica.



Tagiades japetus ravina.



Tanaecia cibraitis.





Vindula erota pallida.

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vi.1909 & ♀17.ix.1915; Accession no. 11269) collected from Andaman Islands are all between April—October. However, in Mt. Harriet National Park the species was in flight during December—January. Its habitat here was a typical 'dense tropical evergreen forest' with closed canopy, where one individual (♂) was observed sulking in the darkness and then settling down on a tree trunk patch close to the ground lit with sunlight late in the afternoon (1438 h).

Besides, the Common Branded Redeye, *Matapa aria aria* (Moore, [1866]) was also recorded from Central Andaman, which was also believed to be extinct from Andaman Islands (Khatri 1993; Mohanraj & Veenakumari 2011). However, this species which mainly breeds on bamboos, is common in its entire distribution range which includes the entire Indian Sub-Continent and there is also one recent photographic record (30.iii.2015) of this species from Chidiyatapu, South Andaman (Saji et al. 2022).

The findings of the present study thus add to the existing knowledge on site specific locations and seasonality of uncommon, rare and endemic butterfly taxa of Andaman Islands.

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